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## QUIZZES

Practice test 1 Unit 7



10 Questions



7 min

Topics  
OHM's Law

Start Quiz

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06 : 57



1/10



7 min



Hint

Q : The graphical representation of Ohm's law is

A

hyperbola

B

ellipse

C

parabola

D

straight line

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**SAEED MDCAT TEAM**



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1

2

3

4

5

6

7

06 : 55



2/10



7 min



Hint

Q : Ohm's law explain the behavior of current under the constant

A

resistance

B

voltage

C

current

D

both a and b

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1

2

3

4

5

6

7

06 : 52



3/10



7 min



Hint

Q : The graphical representation of Ohm's law is

A

straight line

B

parabola

C

hyperbola

D

ellipse

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**SAEED MDCAT TEAM**



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1

2

3

4

5

6

7

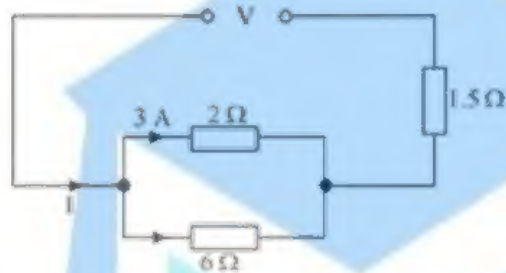


06 : 45



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Q : In the circuit shown, there is a current of 3A in the 2 ohm resistor.



What are the values of the current  $I$  delivered by, and the voltage  $V$  across the power supply?

$I / A \quad V / V$

- (A) 3    10.5
- (B) 4    9
- (C) 4    12
- (D) 12    18

3 10.5

A

4 9

B

4 12

C

12 18

D

1

2

3

4

5

6

7

06 : 33



5/10



7 min

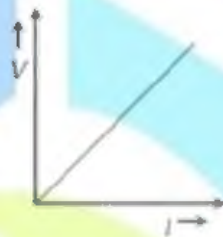


Hint

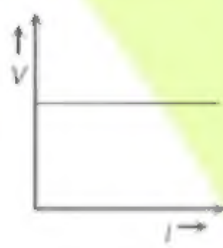
Q:

Which of the adjoining graphs represents ohmic resistance

A



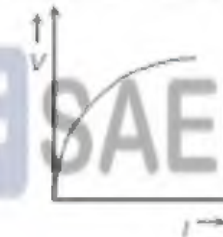
B



C



D



1

2

3

4

5

6

7

06 : 31



6/10



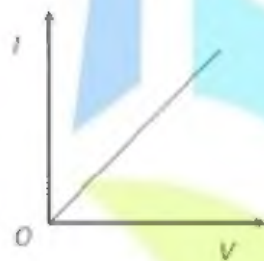
7 min



Hint

Q :

I-V characteristic of a copper wire of length  $L$  and area of cross-section  $A$  is shown in figure. The slope of the curve becomes



A

More if the experiment is performed at higher temperature

B

More if a wire of steel of same dimension is used

C

More if the length of the wire is increased

D

Less if the length of the wire is increased

1

2

3

4

5

6

7

06 : 28



7/10



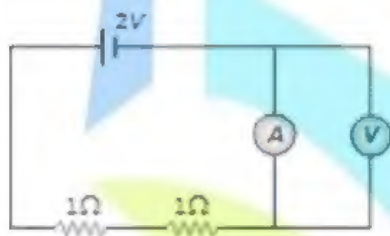
7 min



Hint

Q :

In the circuit shown, A and V are ideal ammeter and voltmeter respectively. Reading of the voltmeter will be



A

2 V

B

1 V

C

0.5 V

D

Zero



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1

2

3

4

5

6

7



06 : 25



8/10



7 min



Hint

Q:

$62.5 \times 10^{18}$  electrons per second are flowing through a wire of area of cross-section  $0.1 \text{ m}^2$ , the value of current flowing will be

A

1 A

B

0.1 A

C

10 A

D

0.11 A

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4

5

6

7

8

9

10

06 : 23



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9/10



7 min



Hint

Q:

The reciprocal of resistance is

A

Conductance

B

Resistivity

C

Voltage

D

conductivity

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4

5

6

7

8

9

10

Q:

A coil takes 15 min to boil a certain amount of water, another coil takes 20 min for the same process. Time taken to boil the same amount of water when both coil are connected in series

- ☐ 5 min
- ☐ 8.6 min
- ☐ 35 min
- ☐ 30 min

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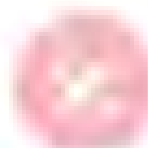
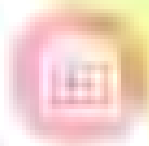
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## QUIZ RESULT

Practice test 1 Unit 7



0/10

0%

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Correct



Unattempted



Incorrect



1/10

Q : The graphical representation of Ohm's law is

\_\_\_\_\_



hyperbola



ellipse



parabola



straight line

Explanation

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Book line



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Correct



Unattempted



Incorrect



2/10

Q : Ohm's law explain the behavior of current under the constant



resistance



voltage



current



both a and b

Explanation

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information



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Correct Practice Halted

Incorrect

Q : The graphical representation of Ohm's law is

☒ straight line

☐ parabola

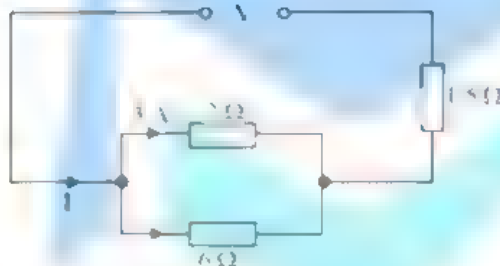
☐ hyperbola

☐ ellipse

Explanation



Q : In the circuit shown, there is a current of 3A in the 2 ohm resistor.



What are the values of the current  $I$  delivered by, and the voltage  $V$  across the power supply?

$I / A \quad V / V$

- (A) 3    10.5
- (B) 4    9
- (C) 4    12
- (D) 12   18

3 10.5

4 9

4 12



3 10.5

4 9

4 12

12 18

Explanation

$$V_{2\Omega}/R = 3 \times 2 = 6V$$

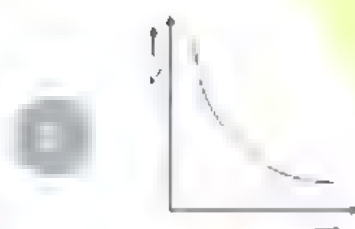
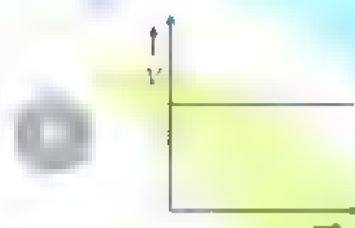
$$I_{6\Omega} = \frac{V}{R} = \frac{6}{6} = 1A$$

$$R_{eq} = \frac{2 \times 6}{2 + 6} = \frac{12}{8} = \frac{3}{2}$$

$$R_{eq} = 1.6^2 \Omega$$

$$V_T = 6 + 6 = 12V$$

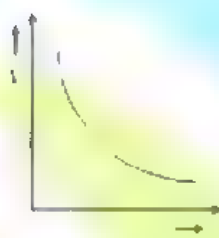
Which of the adjoining graphs represents ohmic resistance



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Explanation



Explanation

For ohmic resistance  
 $V \propto I$

$V = IR$   
(here R is constant)



1. \_\_\_\_\_



2. \_\_\_\_\_



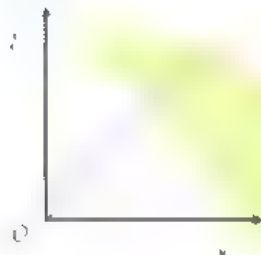
correct



6/10

Q:

I-V characteristic of a copper wire of length  $L$  and area of cross-section  $A$  is shown in figure. The slope of the curve becomes



More if the experiment is performed at higher temperature



More if a wire of steel of same dimension is used

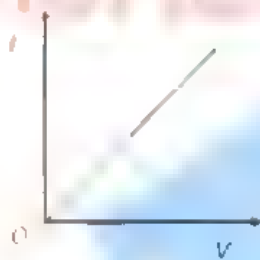


More if the length of the wire is increased



Less if the length of the wire is increased





More if the experiment is performed at higher temperature

More if a wire of steel of same dimension is used

More if the length of the wire is increased

Less if the length of the wire is increased

Explanation

Slope of V-i curve

$$= R (= \rho l / A)$$

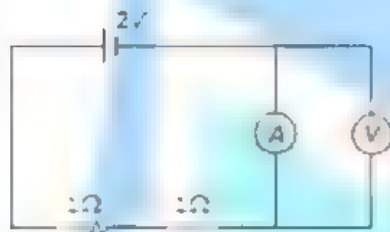
But in given curve axis of i and V are interchanged. So slope of given curve

$$= 1/R (= A / \rho l)$$

i.e. with the increase in length of the wire. Slope of the curve will decrease.

Q:

In the circuit shown, A and V are ideal ammeter and voltmeter respectively. Reading of the voltmeter will be



☐ 2 V

☐ 1 V

☐ 0.5 V

☒ Zero

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Explanation

Zero (No potential difference across voltmeter).



Correct

Undeleted



Incorrect



Deleted

Q:

$62.5 \times 10^{18}$  electrons per second are flowing through a wire of area of cross-section  $0.1 \text{ m}^2$ , the value of current flowing will be



1 A



0.1 A



10 A



0.11 A

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Explanation



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$$i = \frac{ne}{t} = \frac{62.5 \times 10^{18} \times 1.6 \times 10^{-19}}{1}$$



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Answer



Comments



Correct



9/10

Q:

The reciprocal of resistance is



Conductance



Resistivity



Voltage



conductivity

Explanation

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The reciprocal of resistance is called conductance

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correct



10/10

Q:

A coil takes 15 min to boil a certain amount of water, another coil takes 20 min for the same process. Time taken to boil the same amount of water when both coils are connected in series



5 min



8 6 min



35 min



30 min

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Explanation



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Time

$$t_s = t_1 + t_2 = 35 \text{ min.}$$

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## QUIZZES

Practice test 2 Unit 7

100 Questions

1 Test

10 Topics

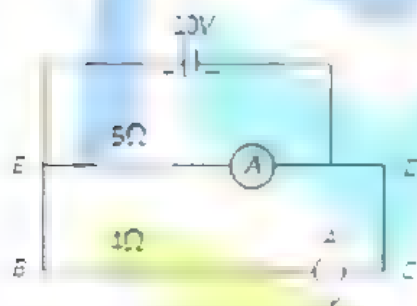
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Q:

In the given figure, when key K is opened, the reading of the ammeter A will be



☐ 50 A

☐ 2 A

☒ 0.5 A

☐ 10 A

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Q:

The resistivity of iron is  $1 \times 10^{-7} \text{ ohm-m}$ . The resistance of a iron wire of particular length and thickness is 1 ohm. If the length and the diameter of wire both are doubled, then the resistivity in ohm-m will be

☐  $1 \times 10^{-7}$

☐  $2 \times 10^{-7}$

☐  $4 \times 10^{-7}$

☒  $8 \times 10^{-7}$

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SAEED MDCAT TEAM

f SAEEDMDCAT

Q:

A certain piece of silver of given mass is to be made like a wire. Which of the following combination of length ( $L$ ) and the area of cross-sectional will lead to the smallest resistance

- ☐ L and A
- ☐  $2L$  and  $A/2$
- ☐  $L/2$  and  $2A$
- ☐ Any of the above, because volume of silver remains same

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Q:

A nichrome wire 50 cm long and one square millimetre cross-section carries a current of 4A when connected to a 2V battery. The resistivity of nichrome wire in ohm metre is

- ☐  $1 \times 10^{-6}$
- ☐  $4 \times 10^{-7}$
- ☐  $3 \times 10^{-7}$
- ☐  $2 \times 10^{-7}$

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SAEED MDCAT TEAM

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Q:

If a wire of resistance  $R$  is melted and recasted to half of its length, then the new resistance of the wire will be

☐  $R/4$

☐  $R/2$

☐  $R$

☒  $2R$

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SAEED MDCAT TEAM

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Q:

A resistance  $R$  is stretched to four times its length. Its new resistance will be

☐  $4R$

☐  $64R$

☐  $R/4$

☐  $16R$

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SAEED MDCAT TEAM

f SAEEDMDCAT



Q:

Two wires that are made up of two different materials whose specific resistance are in the ratio 2 : 3, length 3 : 4 and area 4 : 5. The ratio of their resistances is

☐ 6 : 5

☐ 6 : 8

☐ 5 : 8

☐ 1 : 2

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Q:

The resistance of a thin wire in comparison of a thick, wire of the same material

- ☐ is low
- ☐ is equal
- ☐ depends upon the metal of the wire
- ☐ is high

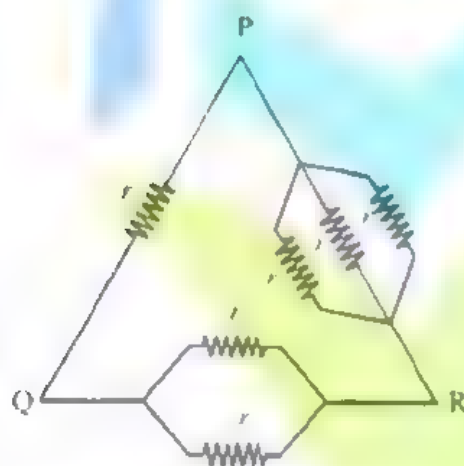
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Q:

Six equal resistances are connected between points P, Q and R as shown in figure. Then net resistance will be maximum between:



P and R



P and Q



Q and R

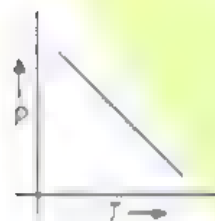
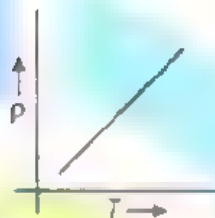


Any two points



Q:

The temperature ( $T$ ) dependence of resistivity ( $\rho$ ) of a semiconductor is represented by



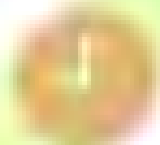


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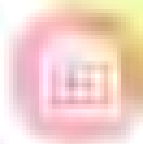


## QUIZ RESULT

Practice test 2 Unit 7



Time



Score



C/10



0%

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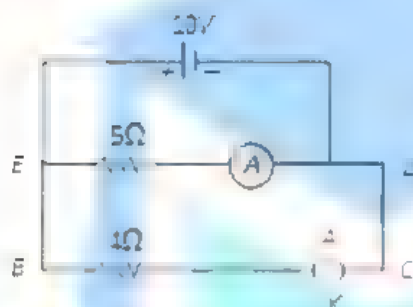


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Q:

In the given figure, when key K is opened, the reading of the ammeter A will be



50 A



2 A



0.5 A



10 A

Explanation



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The circuit will be as shown  
 $I = 10/5 = 2A$



Correct

Indicate speed



Incorrect



Selected

Q:

The resistivity of iron is  $1 \times 10^{-7}$  ohm-m. The resistance of a iron wire of particular length and thickness is 1 ohm. If the length and the diameter of wire both are doubled, then the resistivity in ohm-m will be



$1 \times 10^{-7}$



$2 \times 10^{-7}$



$4 \times 10^{-7}$



$8 \times 10^{-7}$

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Explanation



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Resistivity of some material is its intrinsic property and is constant at particular temperature. Resistivity does not depend upon shape.



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correct



3/10

Q:

A certain piece of silver of given mass is to be made like a wire. Which of the following combination of length (L) and the area of cross-sectional will lead to the smallest resistance



L and A



2L and A/2



L/2 and 2 A



Any of the above, because volume of silver remains same

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Explanation



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$$R = \rho l / A$$

Direct 4/11

Q:

A nichrome wire 50 cm long and one square millimetre cross-section carries a current of 4A when connected to a 2V battery. The resistivity of nichrome wire in ohm metre is

☒  $1 \times 10^{-6}$

☐  $4 \times 10^{-7}$

☐  $3 \times 10^{-7}$

☒  $2 \times 10^{-7}$

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SAEED MDCAT TEAM

Explanation

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$$R = \frac{V}{i} = \rho \frac{l}{A} \Rightarrow \frac{2}{4} = \rho \frac{50 \times 10^{-2}}{(1 \times 10^{-3})^2} \Rightarrow \rho = 2 \times 10^{-7} \text{ ohm metre}$$



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Correct



Incorrect



Correct



5/10

Q:

If a wire of resistance  $R$  is melted and recasted to half of its length, then the new resistance of the wire will be



$R/4$



$R/2$



$R$



$2R$

Explanation

$$R \propto l^2 \Rightarrow \frac{R_1}{R_2} = \left( \frac{l_1}{l_2} \right)^2 \Rightarrow \frac{R}{R_2} = \left( \frac{l}{l/2} \right)^2 \Rightarrow \frac{R}{R_2} = 4 \Rightarrow R_2 = \frac{R}{4}$$





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correct



6/10

Q:

A resistance  $R$  is stretched to four times its length. Its new resistance will be



$4R$



$64R$



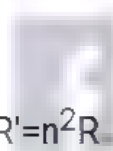
$R/4$



$16R$

Explanation

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$$R' = n^2 R \rightarrow R = 16R$$



Correct

Ultimate



Q:

Two wires that are made up of two different materials whose specific resistance are in the ratio 2 : 3, length 3 : 4 and area 4 : 5. The ratio of their resistances is



6 : 5



6 : 8



5 : 8



1 : 2

Explanation

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$$\frac{R_1}{R_2} = \frac{\rho_1}{\rho_2} \times \frac{l_1}{l_2} \times \frac{A_2}{A_1} = \frac{2}{3} \times \frac{3}{4} \times \frac{5}{4}$$



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correct



8/10

Q:

The resistance of a thin wire in comparison of a thick, wire of the same material



is low



is equal



depends upon the metal of the wire



is high

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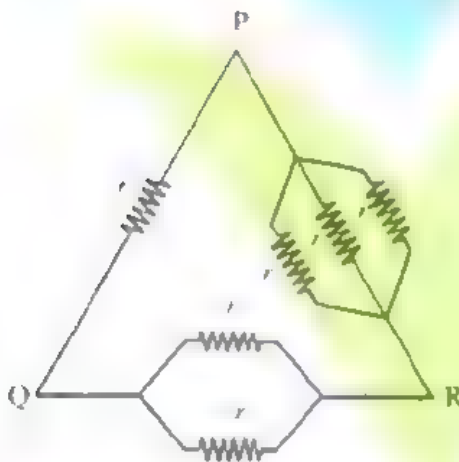
correct



9/10

Q:

Six equal resistances are connected between points P, Q and R as shown in figure. Then net resistance will be maximum between:



P and R



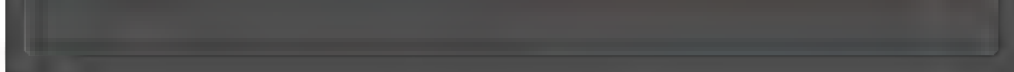
P and Q



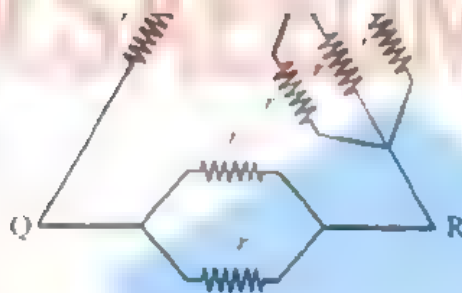
Q and R



Any two points



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P and R



P and Q



Q and R



Any two points

Explanation

Effective resistance between P and Q,  $r_{PQ} = 1$

$$r_{OR} = \frac{r}{2} \parallel \left( r - \frac{r}{3} \right) = \frac{\frac{r}{2} \times \frac{4}{3}r}{\frac{r}{2} + \frac{4}{3}r} = 1$$

$$r_{PR} = \frac{r}{3} \parallel \left( \frac{r}{2} + r \right) = \frac{\frac{r}{3} \times \frac{3}{2}r}{\frac{r}{3} + \frac{3}{2}r}$$



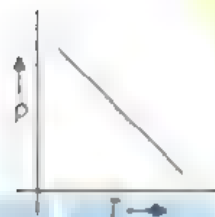
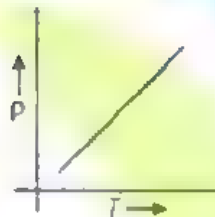
correct



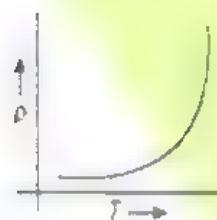
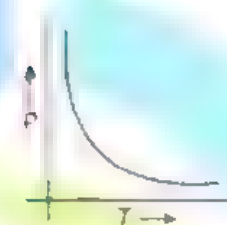
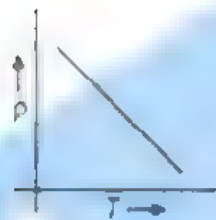
10/10

Q:

The temperature ( $T$ ) dependence of resistivity ( $\rho$ ) of a semiconductor is represented by



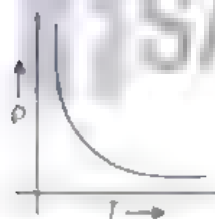




Explanation

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The temperature coefficient of resistance of semiconductors is negative that is their electrical resistance decreases with rise in temperature.



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QUIZZES

Practice test 3 Unit 7

10 Questions

1 Hour

100 Marks

Start Quiz

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SAEEDMDCAT

Q : A battery is used to light a 24 W electric lamp. The battery provides a charge of 120 C in 60 s.



What is the potential difference across the bulb?

☐ 5 V

☐ 12 V

☐ 24 V

☒ 120 V

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SAEEDMDCAT

Q : The powers of two electric bulbs are 100 W and 200 W. Which are connected to power supply of 220 V. The ratio of resistance of their filament will be

☐ 1:2

☐ 2:1

☐ 1:3

☐ 4:3

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SAEED MDCAT TEAM

 SAEEDMDCAT

Q : Two electric bulbs have tungsten filament of same length. If one of them gives 60 watt and other 100 watt, then

- ☒ 100 watt bulb has thicker filament
- ☐ 60 watt bulb has thicker filament
- ☐ Both filaments are of same thickness
- ☐ It is not possible to get different wattages unless the lengths are different

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Q : In fig. a fuse in one of the bulbs causes all the other to go out. Which bulb has fused?



☐ 1

☐ 2

☐ 3

☒ 4 or 5

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Q : In a large building, there are fifteen bulbs of 40 W, five bulbs of 100 W, five fans of 80 W and one heater of 1 kW. The voltage of the electric mains is 220 V. The minimum capacity of the main fuse of the building will be

☐ 8 A

☐ 10 A

☐ 12 A

☐ 14 A

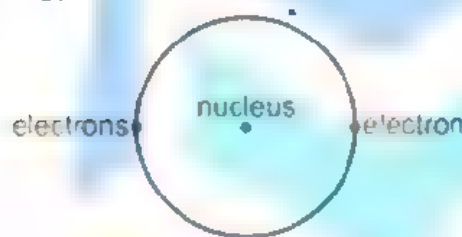
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SAEED MDCAT TEAM

SAEEDMDCAT



Q : The diagram shows a model of an atom in which two electrons move around a nucleus in a circular orbit. The electrons complete one full orbit in  $1.0 \times 10^{-15}$  s.



Which is the current caused by the motion of the electrons in the orbit?



$1.6 \times 10^{34}$  A



$3.2 \times 10^{-34}$  A



$1.6 \times 10^{-4}$  A



$3.2 \times 10^{-4}$  A

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Q : Electrical power is expressed as

☐  $I \cdot \frac{\Delta Q}{\Delta t}$

☐  $\frac{t}{W}$

☐  $\frac{I^2}{t}$

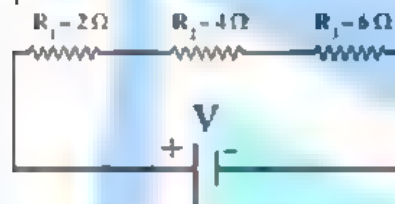
☐  $\frac{\Delta Q}{I \cdot \Delta t}$

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 SAEEDMDCAT

Q : A circuit diagram is shown in which we have three resistances. Among three which develops maximum power?



☐  $R_1$

☐  $R_2$

☐  $R_3$

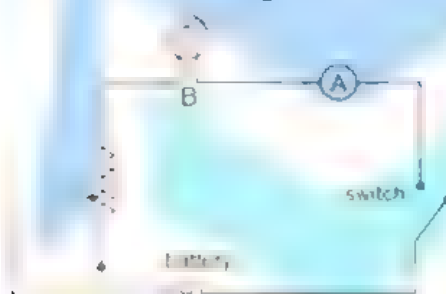
☐ in series power remains same

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Q : In the circuit below, bulb B does not light a though ammeter A indicates that the current is flowing. Why does the bulb not light?



- ☐ The bulb is fused
- ☐ There is a break in the circuit between bulb and ammeter
- ☐ The variable resistor has too large
- ☐ There is a break in the circuit between the bulb and variable resistor

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Q:

From a power station, the power is transmitted at a very high voltage because -

- ☐ it is generated only at high voltage
- ☐ it is cheaper to produce electricity at high voltage
- ☐ electricity at high voltage is less dangerous
- ☐ there is less loss of energy in transmission at high voltage

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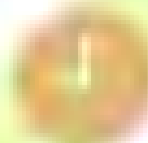
SAEED MDCAT TEAM

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## QUIZ RESULT

Practice test 3 Unit 7



0/10

0%

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Incorrect

Q : A battery is used to light a 24 W electric lamp. The battery provides a charge of 120 C in 60 s.



What is the potential difference across the bulb?

5 V

12 V

24 V

120 V

Explanation

$$I = \frac{120}{60} = 2A$$

$$P = IV \rightarrow V = \frac{P}{I} = \frac{24}{2} = 12V$$



Correct

Unlearned



Wrong



Unlearned

Q : The powers of two electric bulbs are 100 W and 200 W. Which are connected to power supply of 220 V. The ratio of resistance of their filament will be



1:2



2:1



1:3



4:3

Explanation

$$P = \frac{V^2}{R}$$

$$\frac{P_1}{P_2} = \frac{R_2}{R_1} (\because V = \text{constant})$$

$$\frac{100}{200} = \frac{R_2}{R_1} \Rightarrow \frac{R_1}{R_2} = \frac{2}{1}$$





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Correct



Unattempted



Incorrect



3/10

Q : Two electric bulbs have tungsten filament of same length. If one of them gives 60 watt and other 100 watt, then



100 watt bulb has thicker filament



60 watt bulb has thicker filament



Both filaments are of same thickness



It is not possible to get different wattages unless the lengths are different

Explanation

$$P = \frac{V^2}{R}$$

If P is more, R is less then

$$R = \rho \frac{L}{A}$$

For

less R, 'A' is more. So, 100 W bulb has thicker element



Correct

Unattempted

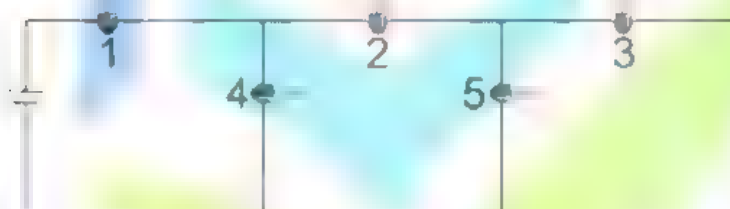


Incorrect



4/10

Q : In fig. a fuse in one of the bulbs causes all the other to go out. Which bulb has fused?



1



2



3



4 or 5

Explanation



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A simple examination of the circuit leads us to the right choice



Incorrect



5/10

Q : In a large building, there are fifteen bulbs of 40 W, five bulbs of 100 W, five fans of 80 W and one heater of 1 kW. The voltage of the electric mains is 220 V. The minimum capacity of the main fuse of the building will be



8 A



10 A



12 A



14 A

Explanation

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Total power (P)

$$= 15 \times 40 + 5 \times 100 + 5 \times 80 + 1000 = 2500 \text{ W}$$

Main supply voltage = 220 V

$$\Rightarrow \text{current} = \frac{2500}{220} = 11.3 \text{ A}$$

$$\Rightarrow \text{minimum capacity} = 12 \text{ A}$$

Q : The diagram shows a model of an atom in which two electrons move around a nucleus in a circular orbit. The electrons complete one full orbit in  $1.0 \times 10^{-15}$  s.



Which is the current caused by the motion of the electrons in the orbit?

☐  $1.6 \times 10^{-34}$  A

☐  $3.2 \times 10^{-34}$  A

☐  $1.6 \times 10^{-4}$  A

☒  $3.2 \times 10^{-4}$  A

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Using the formula  $I = \frac{q}{t}$

$$I = \frac{2 \times 1.60 \times 10^{-19}}{1.0 \times 10^{-15}} = 3.2 \times 10^{-4} \text{ A}$$



correct

7/10

Q : Electrical power is expressed as



$$I \cdot \frac{\Delta Q}{\Delta t}$$



$$\frac{t}{W}$$



$$\frac{I}{t}$$



$$\frac{\Delta Q}{V \Delta t}$$

Explanation

$$P = \frac{\Delta W}{\Delta t} = \frac{\Delta Q V}{\Delta t}$$



Correct

Marked as correct

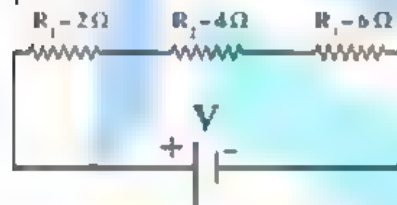


Incorrect



Flag

Q : A circuit diagram is shown in which we have three resistances. Among three which develops maximum power?

 $R_1$  $R_2$  $R_3$ 

in series power remains same

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Explanation



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$$P = I^2 R$$

In series  $I = \text{same}$

$$P \propto R$$

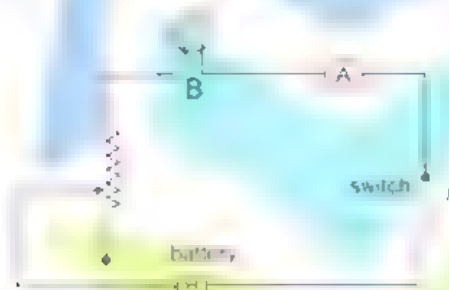


Correct

Question 10



Q : In the circuit below, bulb B does not light although ammeter A indicates that the current is flowing. Why does the bulb not light?



The bulb is fused



There is a break in the circuit between bulb and ammeter



The variable resistor has too large



There is a break in the circuit between the bulb and variable resistor

Explanation

It is a case of weak current



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correct



10/10

Q:

From a power station, the power is transmitted at a very high voltage because -



it is generated only at high voltage



it is cheaper to produce electricity at high voltage



electricity at high voltage is less dangerous



there is less loss of energy in transmission at high voltage

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QUIZZES

Practice test 4 Unit 7

100 Questions

1 Test

10 Topics

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Q : KCL is according to law of conservation of

- ☐ mass
- ☐ charge
- ☐ energy
- ☐ none of these

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Q : If a resistor is traversed in the direction of current the change in potential is

- ☐ positive
- ☐ zero
- ☐ negative
- ☐ constant

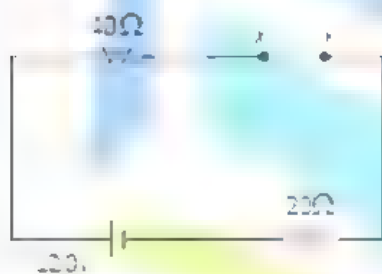
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Q:

In the circuit shown, potential difference between X and Y will be



Zero



20 V



60 V



120 V

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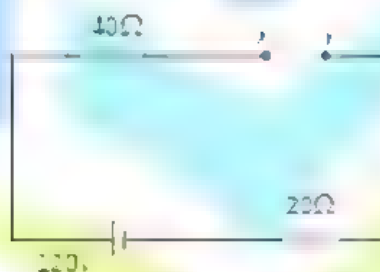


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Q:

Potential difference across the  $40\Omega$  resistance in given figure will be



Zero



80 V



40 V

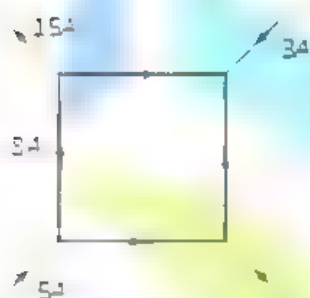


120 V



Q:

The figure shows a network of currents. The magnitude of currents is shown here. The current  $i$  will be



3 A



13 A



23 A



3 A

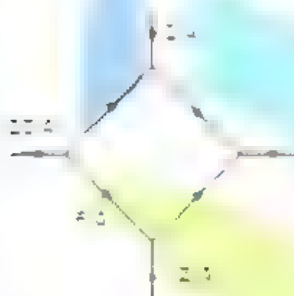


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Q:

The figure shows a network of currents. The magnitude of currents is shown here. The current  $I$  will be



3 A



9 A



13 A



19 A

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Q:

Sensitivity of potentiometer can be increased by

- ☐ Increasing the e.m.f. of the cell
- ☒ Increasing the length of the potentiometer wire
- ☐ Decreasing the length of the potentiometer wire
- ☐ None of the above

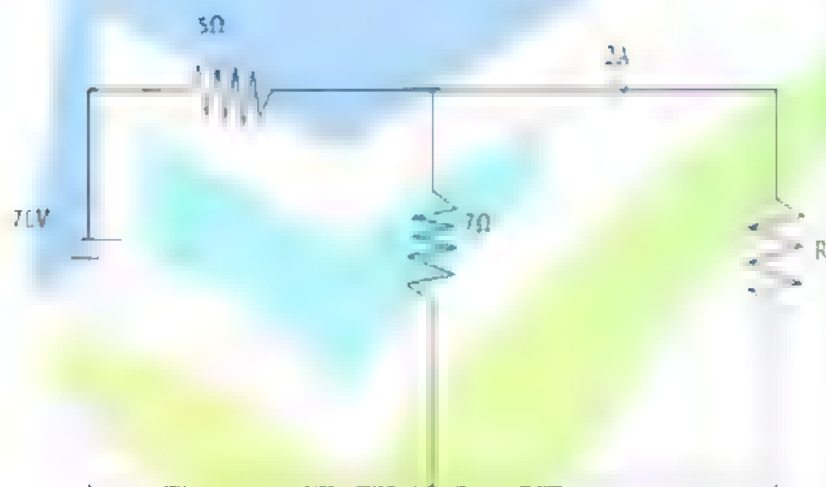
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Q : Find R in the given circuit using KVL



17.5  $\Omega$



17.2  $\Omega$



17.4  $\Omega$



17.8  $\Omega$



SAEEDMDCAT



Q:

A potentiometer consists of a wire of length 4 m and resistance  $10\Omega$ . It is connected to a cell of e.m.f. 2 V. The potential difference per unit length of the wire will be

☐ 0.5 V/m

☐ 2 V/m

☐ 5V/m

☒ 10V/m

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Q:

The material of wire of potentiometer is

- ☐ Copper
- ☒ Steel
- ☐ Manganin
- ☐ Aluminium

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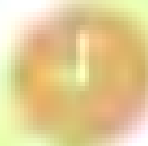
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## QUIZ RESULT

Practice test 4 Unit 7



Time



Score



C/10



0%

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Correct



Unanswered



Incorrect



1/10

Q : KCL is according to law of conservation of



mass



charge



energy



none of these

Explanation

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Correct



Unattempted



Incorrect



2/10

Q : If a resistor is traversed in the direction of current the change in potential is



positive



zero



negative



constant

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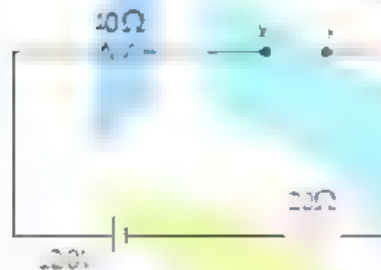
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Q:

In the circuit shown, potential difference between X and Y will be



Zero



20 V



60 V



120 V



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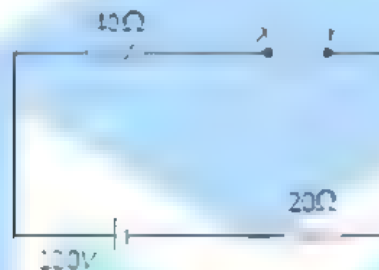
Explanation

In open circuit of a cell  $V = E$

reacti

Q:

Potential difference across the  $40\Omega$  resistance in given figure will be



Zero



80 V



40 V



120 V

Explanation



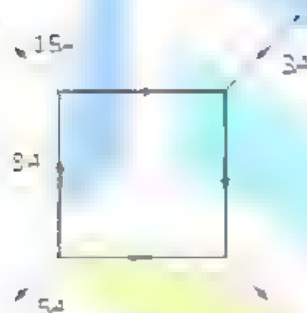
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Zero (Circuit open means no current and hence no potential difference across resistance).



Q:

The figure shows a network of currents. The magnitude of currents is shown here. The current  $i$  will be



3 A



13 A



23 A



3 A

SAEED MDCAT TEAM



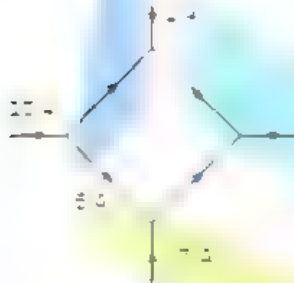
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Explanation

By Kirchhoff's current law.

Q.

The figure shows a network of currents. The magnitude of currents is shown here. The current  $I$  will be



3 A



9 A



13 A



19 A

SAEED MDCAT TEAM



SAEEDMDCAT

Explanation

On applying Kirchhoff's current law  $i = 13$  A.



Correct



Unattempted



Incorrect



7/10

Q:

Sensitivity of potentiometer can be increased by



Increasing the e.m.f. of the cell



Increasing the length of the potentiometer wire



Decreasing the length of the potentiometer wire



None of the above

Explanation

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The sensitivity of potentiometer can be increased by decreasing the potential gradient i.e. by increasing the length of potentiometer wire.

(Sensitivity  $\propto$   
 $1/P.G. \propto$  Length)



Practice test 4 Unit 7

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Correct



Unattempted

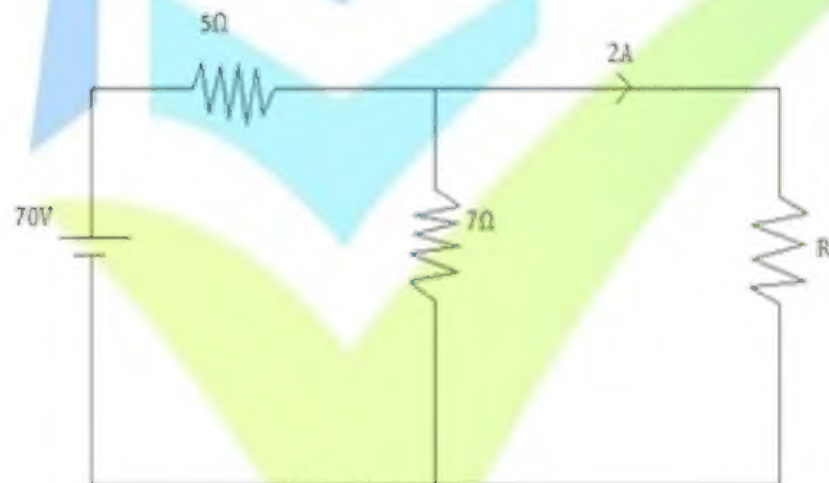


Incorrect



8/10

Q : Find R in the given circuit using KVL



17.5 Ω



17.2 Ω



17.4 Ω



17.8 Ω

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A

17.5  $\Omega$ 

B

17.2  $\Omega$ 

C

17.4  $\Omega$ 

D

17.8  $\Omega$ 

Explanation



$$\text{KVL: } 70 - 5I - 7(I - 2) = 0$$

$$I = 7\text{A}$$

$$\text{KVL to 2nd loop: } 7(I - 2) - 2R = 0$$

$$R = 17.5\Omega$$





Q:

A potentiometer consists of a wire of length 4 m and resistance  $10\Omega$ . It is connected to a cell of e.m.f. 2 V. The potential difference per unit length of the wire will be

A

0.5 V/m

B

2 V/m

C

5V/m

D

10V/m

Explanation

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Since potential difference for full length of wire = 2 V

- P.D. per unit length of wire  
=  $2/4 = 0.5\text{Vm}$



Practice test 4 Unit 7

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Correct



Unattempted



Incorrect



10/10

Q:

The material of wire of potentiometer is

A

Copper

B

Steel

C

Manganin

D

Aluminium

Explanation

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Manganin or constantan are used for making the potentiometer wire.